



Mid-Hudson

Regional Sustainability Plan

November 27, 2012

Current Status and Schedule

- Meeting on Thursday 11/29 in White Plains
 - Westchester County Center: 6:30–8:30 PM
- Initial Draft
 - Available online – www.engagemidhudson.com
- Second Draft
 - To be uploaded Friday 11/30
- Final Draft due to NYSERDA 12/24
- Final Plan to be published following NYSERDA approval

Rules for Commentary

- To comment tonight, you must sign in
- Individuals will be called in the order they signed in
- Comments limited to an initial three (3) minutes
 - Additional time allotted after everyone has spoken
- Comments should be relevant to the Plan and planning process
- Commentary must remain respectful
- Written comments welcome
 - Via Google Doc – link provided on www.engagemidhudson.com
 - Via email – see last slide

The Plan: Background and Central Themes

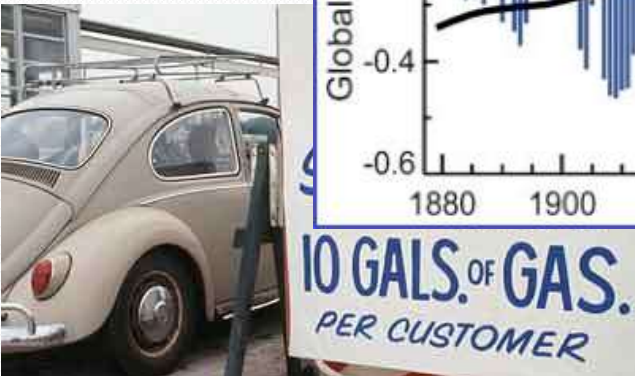
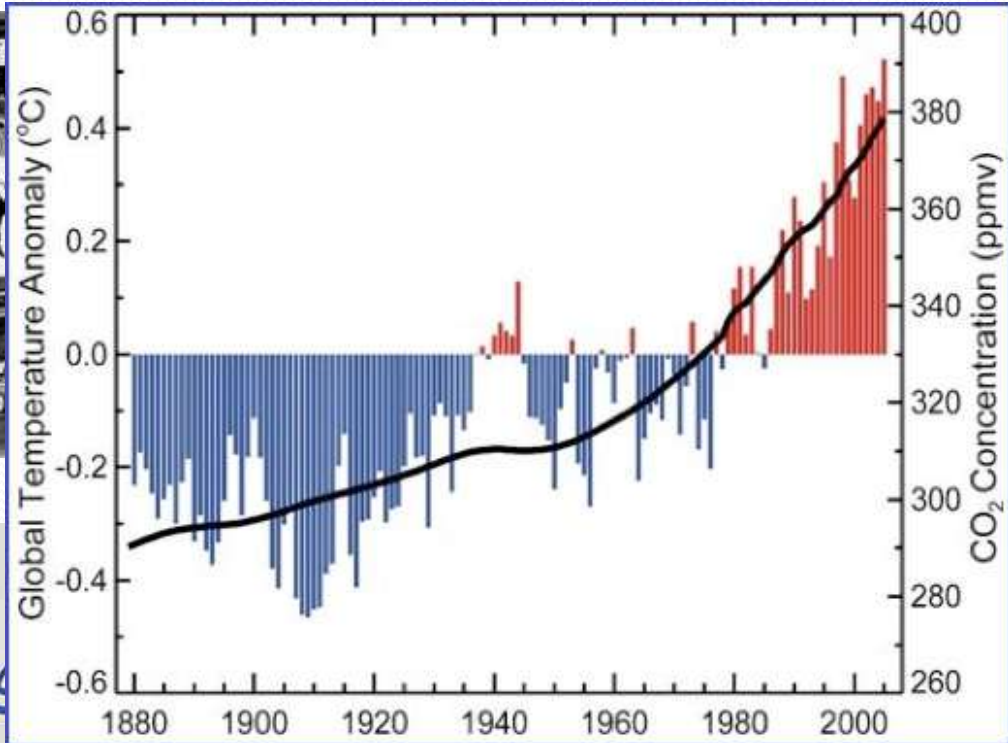
Cleaner, Greener Communities

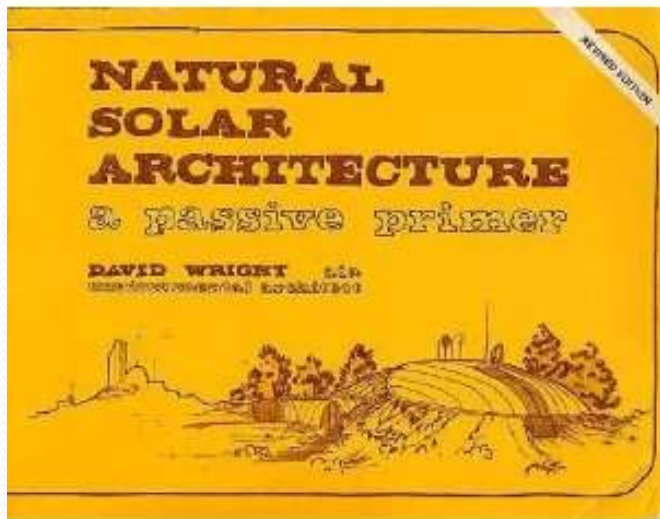
- One of ten initiatives statewide
- Aligned with Governor Cuomo's Regional Economic Development initiative
- NYSERDA-funded; from RGGI money
- Phase 2: Implementation funds will eventually be available on a competitive basis

What is the Mid-Hudson Regional Sustainability Plan?

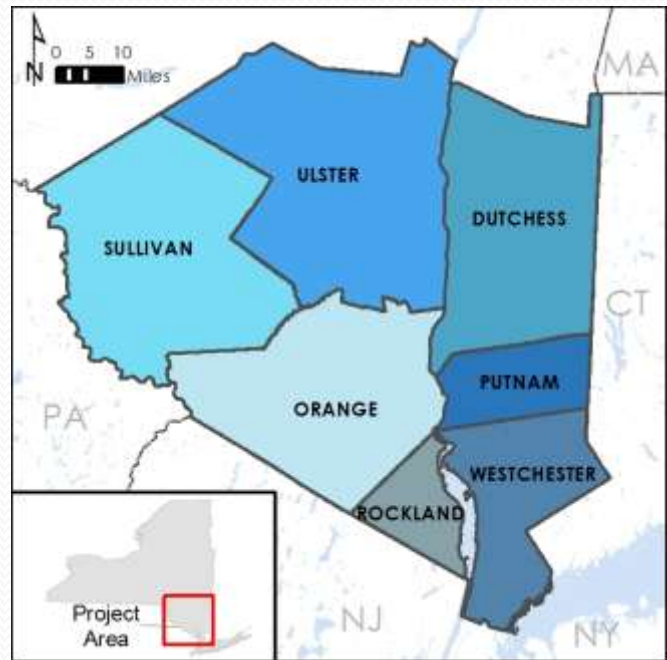
“A **long-term** vision and plan for sustainable development in the Mid-Hudson Region.”

1974 – 2012 – 2050





A long-term vision and plan for sustainable development in the **Mid-Hudson Region**



A long-term vision and plan for **sustainable development** in the Mid-Hudson Region

- Environmental sustainability
 - This includes environmental justice
- Quality of life
- Economic development



Climate Change – Two Aspects

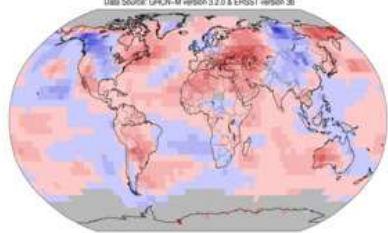
- Adapting to the effects of climate change
 - ADAPTATION
- Reducing the Region's contribution to climate change
 - MITIGATION

What Cornfields Show, Data Now Confirm: July Set Mark as U.S.'s Hottest Month



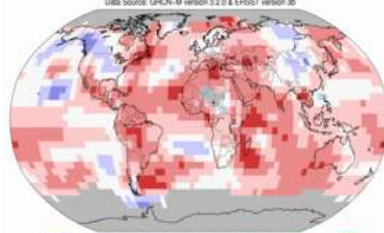
October

Land & Ocean Temperature Anomalies Oct 2012
(with respect to a 1981-2010 base period)
Data Source: GHCN-M version 3.2.0 & ERSST version 3b



October 2012 Blended Land and Sea Surface Temperature Anomalies in degrees Celsius

Land & Ocean Temperature Percentiles Oct 2012
NOAA's National Climatic Data Center
Data Source: GHCN-M version 3.2.0 & ERSST version 3b



October 2012 Blended Land and Sea Surface Temperature Percentiles

The average temperature across land and ocean surfaces during October was 14.63°C (58.23°F). This is 0.63°C (1.13°F) above the 20th century average and ties with 2008 as the fifth warmest October on record. The record warmest October occurred in 2003 and the record coldest October occurred in 1912. This is the 332nd consecutive month with an above-average temperature. The last below-average month was February 1985. The last October with a below-average temperature was 1976. The Northern Hemisphere ranked as the seventh warmest October on record, while the Southern Hemisphere ranked as second warmest, behind 1997.

Hurricane Sandy wreaks havoc on Hudson Valley

Originally published: October 29, 2012 8:41 AM
Updated: October 29, 2012 9:57 PM
By KEN SCHACHTER and JOHN DYER kenneth.schachter@cablevision.com



Photo credit: Susan Stava | At Claremont Condominiums along the waterfront in Nyack, the Hudson River surges onto the boardwalk. (Oct. 29, 2012)

President Obama Declares Westchester, Rockland Counties A Major Disaster Area Due To Sandy

November 2, 2012 12:15 PM

Like 158 Tweet 15 Share 21



Hastings-on-Hudson in Westchester County after Sandy

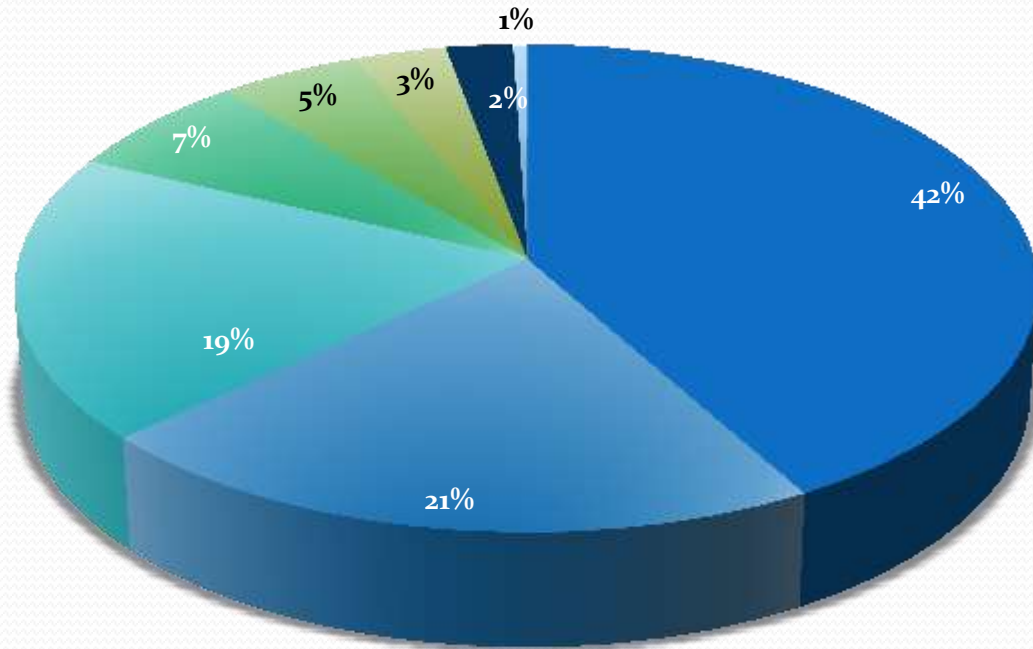
NEW YORK (CBSNewYork) – President Barack Obama has declared [Westchester and Rockland counties](#) Major Disaster areas, Gov. Andrew Cuomo announced today.

The declaration means the federal government can send aid to state and local governments and makes federal funding available to affected individuals. That assistance includes grants for temporary housing, home repairs, low-cost loans to cover property losses, and more.

“To help minimize risks from climate change, New York State has set two goals:

1. Reduce emissions of heat-trapping greenhouse gases by 80 percent from 1990 levels, by the year 2050 ("80 by 50"), and
2. Improve resilience to climate change in all the state's communities.”

GHG Emissions by Sector



- Transportation Energy Consumption
- Residential Energy Consumption
- Commercial Energy Consumption
- Industrial Energy Consumption
- Waste Management
- Industrial Processes
- Energy Generation and Supply
- Agriculture

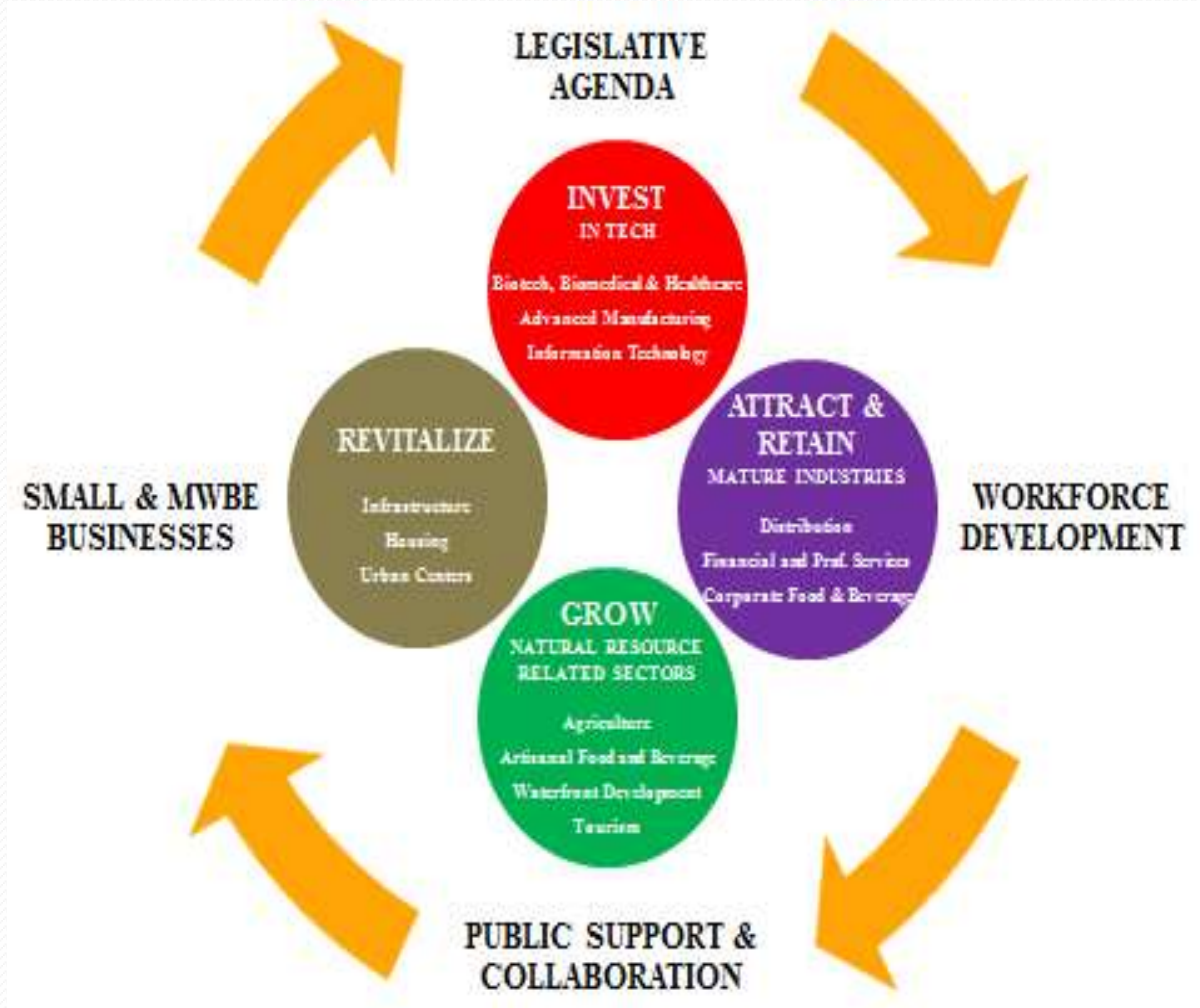
The Plan: Content and Layout

Focus Areas

1. Land Use, Livable Communities, and Transportation
2. Energy
3. Materials Management
4. Agriculture and Open Space
5. Water

Central Themes Discussed Throughout Plan

Align with the Regional Economic Development Strategy



Plan Layout

Where are we?

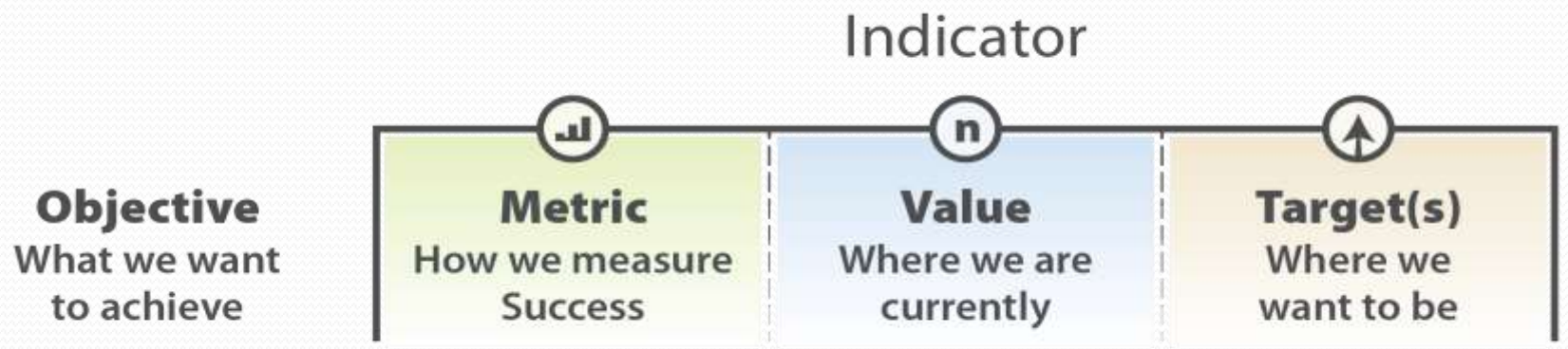
- Baseline Conditions

Where do we want to go?

- Objectives and Indicators

How do we get there?

- Implementation
“Project” Priorities
- Enabling Strategies

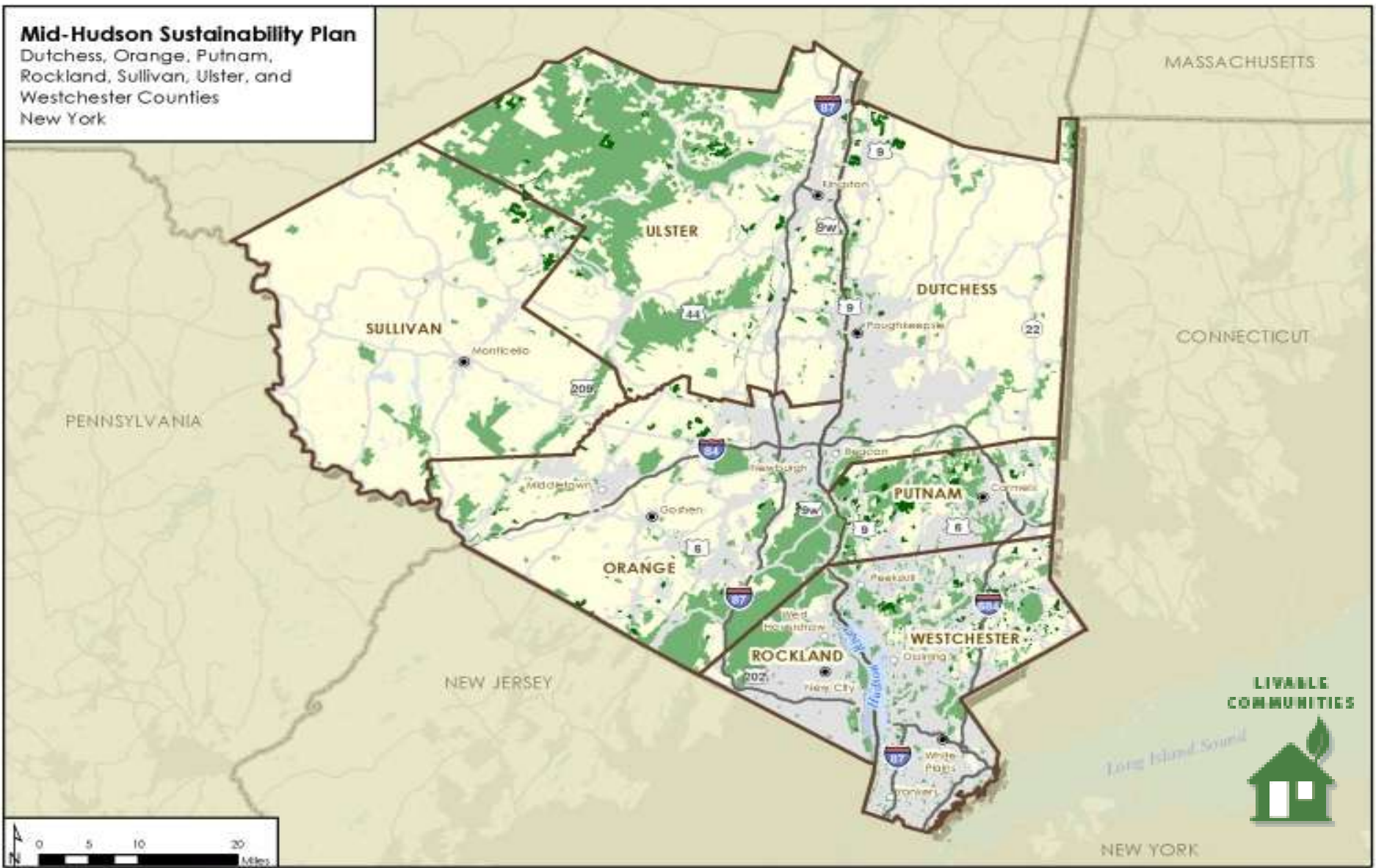


02.EE-003618-0001-03\Figure X Objective and Indicators

1- Land Use, Livable Communities, and Transportation

Mid-Hudson Sustainability Plan

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester Counties
New York



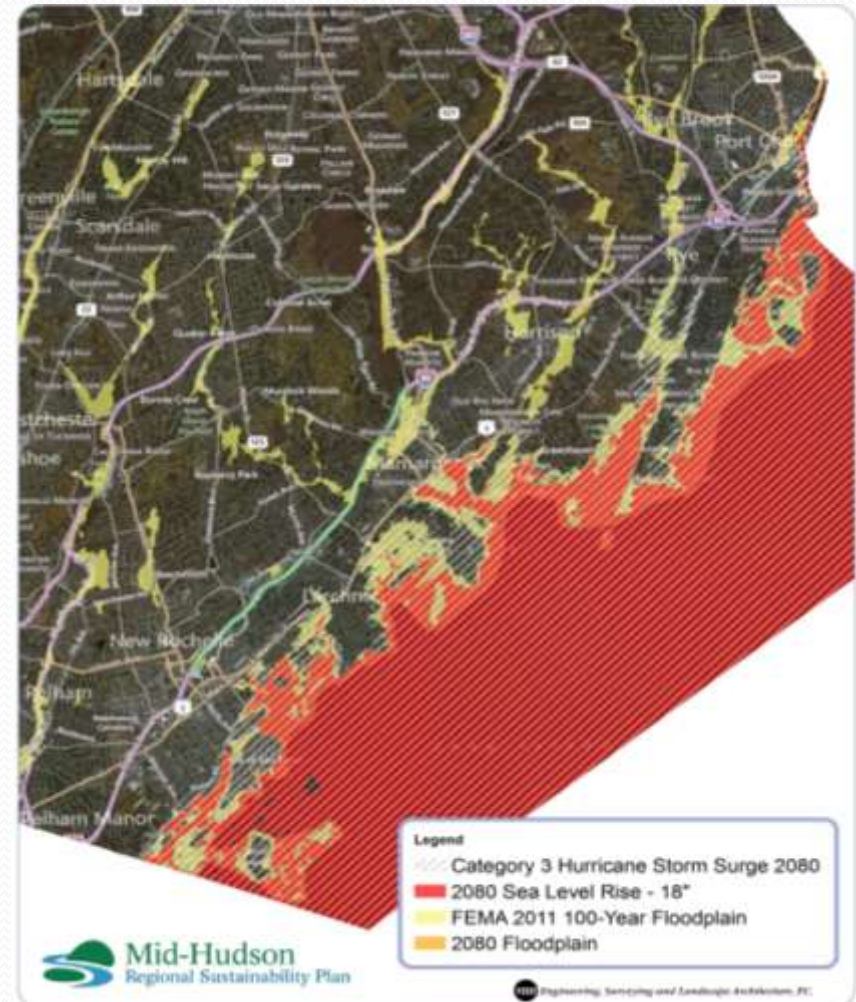
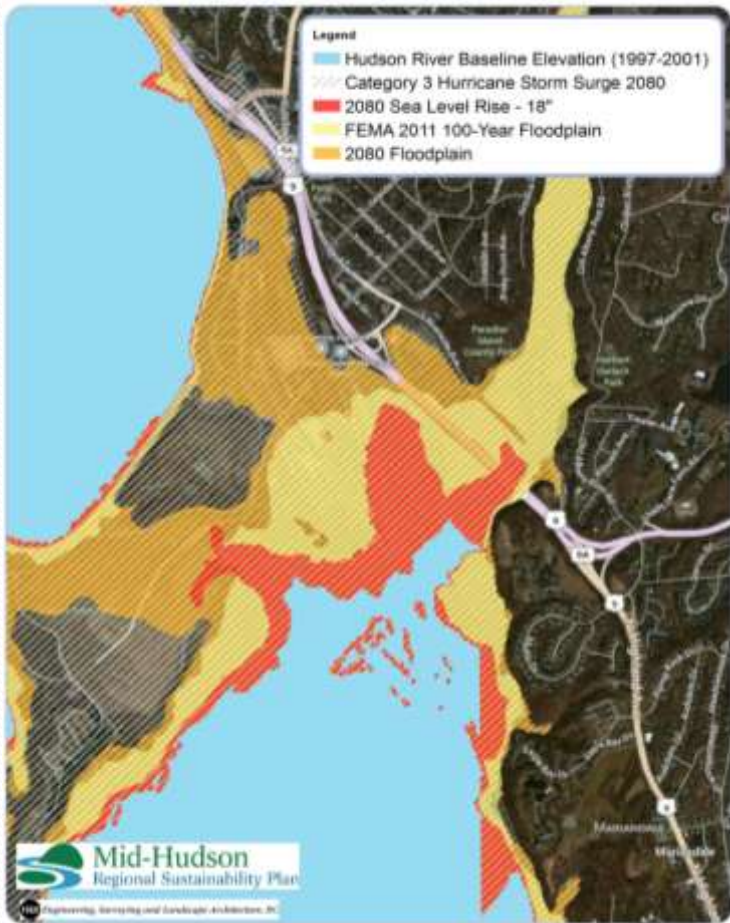
- County Seat
- Other City or Village
- County Boundary
- State Boundary
- Water Body
- Protected Land as Fee Lands
- Protected Land under Conservation Easements
- Urban Area

LIVABLE COMMUNITIES





Climate Change Vulnerabilities



LIVABLE
COMMUNITIES



Climate Change Vulnerabilities





Objectives

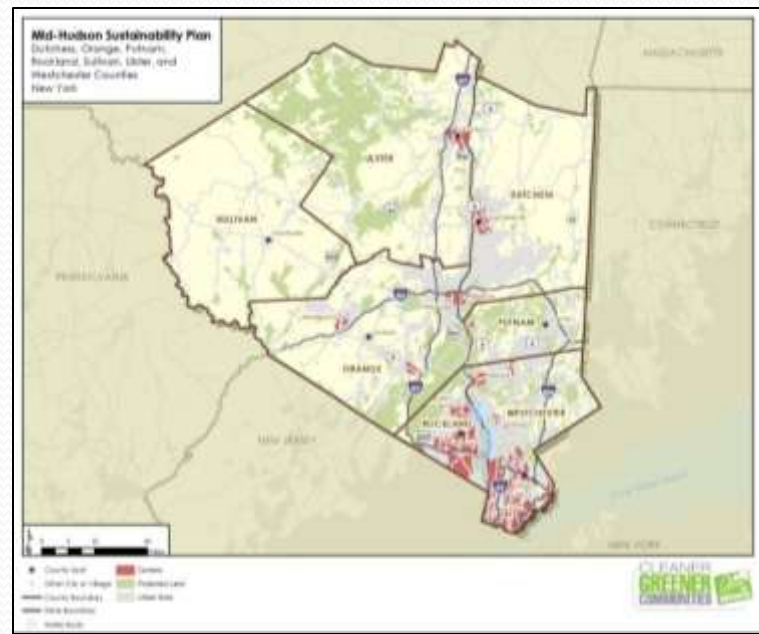
- TL1 - Strengthen Centers Supported by Transit
- TL2 - Create Complete Communities
 - Improve walkability, proximity to services, and jobs/housing balance in communities without access to mass transit
- TL3 - Reduce Transportation Fuel Consumption and GHG Emissions
- TL4 - Improve the Safety and Integrity of Regional Transportation Infrastructure

LIVABLE
COMMUNITIES



Priority 'Projects' for Implementation

- Transit-Oriented Development (TOD) to encourage growth in existing centers with access to transit options
 - E.g. New Rochelle Transit Center; Harriman Center





Priority Projects for Implementation

- Create Complete Communities through:
 - Land Efficient Development (LED)
 - E.g. Kingston Factory adaptive reuse
 - Livability Improvements
 - Street and Sidewalk Improvements
 - E.g. Pedestrian improvements at the intersection of Route 35 & 138 in Lewisboro
 - Bicycle Improvements
 - E.g. the Hudson Fjord Hike/Bike Trail, an eight-mile path between Little Stony Point in Cold Spring and Breakneck Ridge in Beacon
- Expand and Upgrade Mass Transit
- Employ Transportation Demand and Systems Management to Relieve Highway Congestion



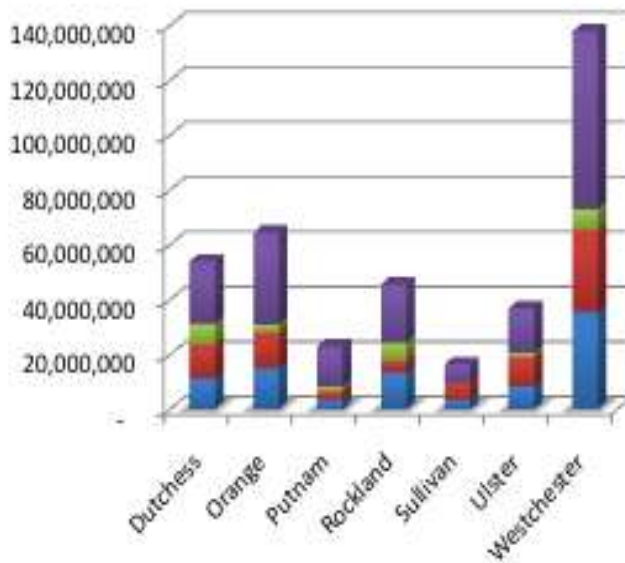
Enabling Strategies

- Zoning, Planning & Legislation
- Funding Tools & Strategies
 - More leeway in the use of Tax Increment Financing (TIF)
- Education & Demonstration Initiatives
 - Build the Mid-Hudson Center for Sustainable Learning
- Vehicle Fuel Efficiency Programs
 - Fleet upgrades and standards
- Freight Efficiency
 - Comprehensive regional freight systems planning study
- Commuter Incentives

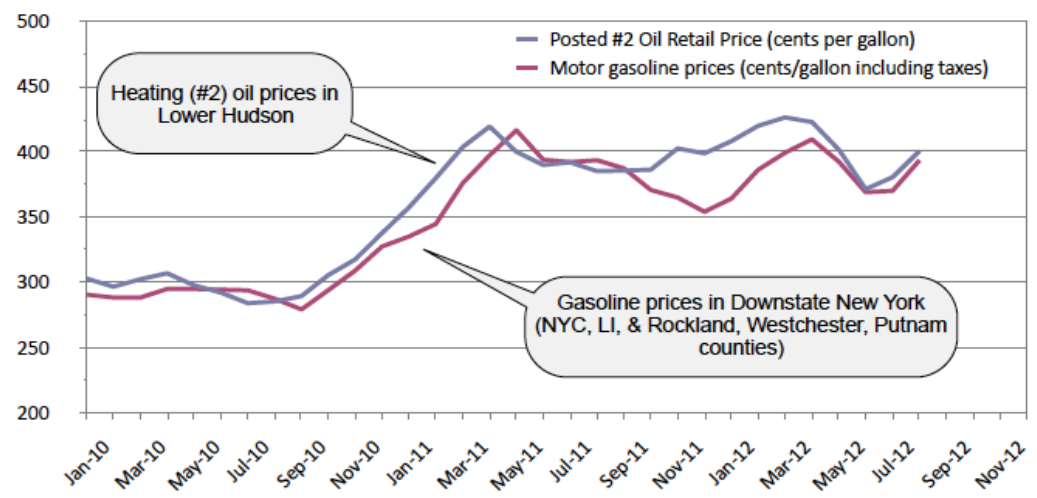
2- Energy



Energy use by county and sector (mmBtu) 2010



Heating oil and gasoline prices in lower Hudson/Downstate NY: 2010-2012

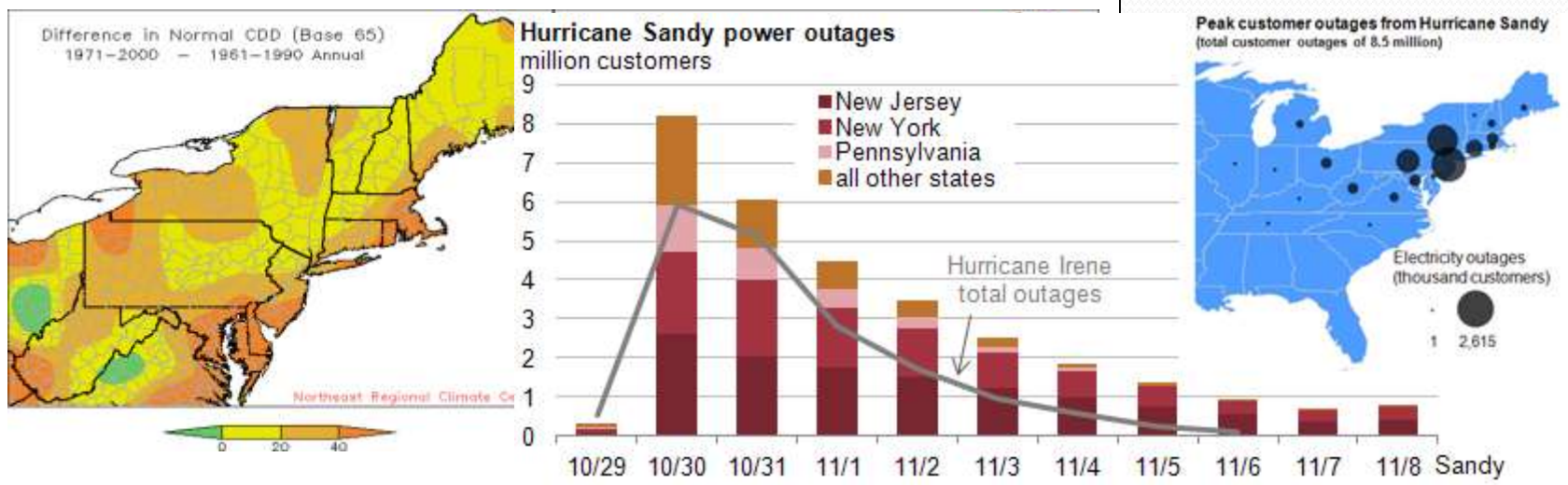


Climate Vulnerabilities



- Increased demand for cooling in summers
- Damage to T & D infrastructure; fuel distribution

Figure 4.6 Heating and Cooling Degree Days in the Region: Historic Trends



Heating and cooling degree days are a standardized measure of the energy demands of air conditioning and heating. Heating degree days (HDD) and cooling degree days (CDD) between two 30 year time periods (1971 to 2000 and 1961 to 1990) (Northeast Regional Climate Center 2009). CDD have increased during this time period while HDD have declined. Further supporting this claim, ClimAID reports that between 1970 and 2007, the number of HDD has declined by 46.3 days per decade (NYSERDA 2011).



Objectives

- EN1 - Become radically less energy intensive while maintaining a strong regional economy
- EN2 - Expand renewable generation as an energy source across the Region
- EN3 - Lower fossil fuel intensity of the built environment
- EN4 - Improve the continuity of the energy delivery system throughout the Region

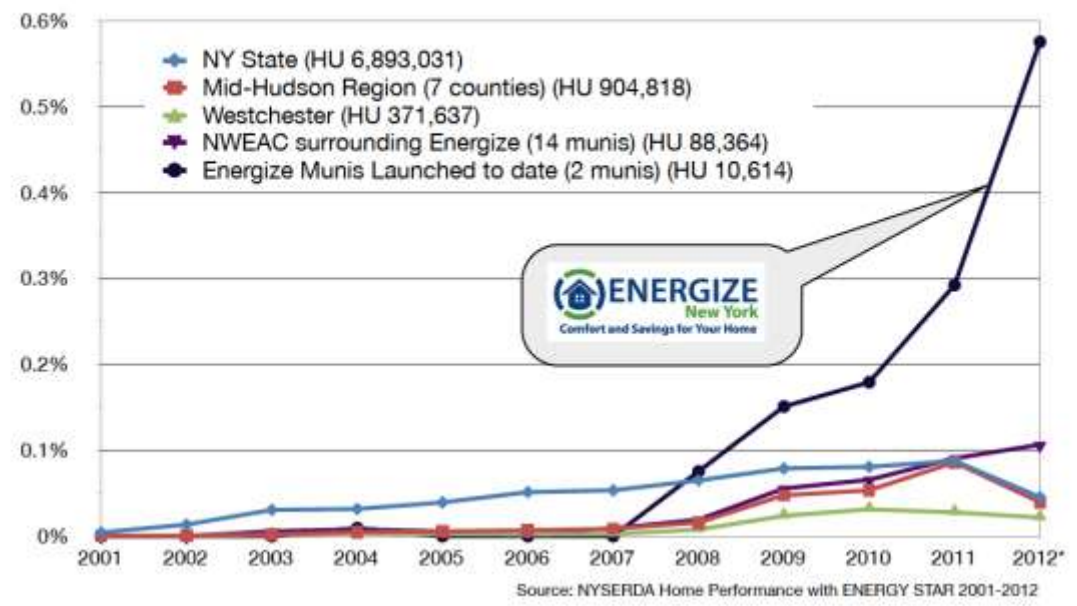
Priority Projects for Implementation



- Increase energy efficiency
 - E.g., expand 'Energize' program to the entire Region

• Create Community Energy Districts

Annual percent of total Housing Units participating in Home Performance with ENERGY STAR
(% of housing units that completed upgrade by geography by year)



is
er priorities:



Enabling Strategies

- Programs to facilitate demand response for small- and medium-sized customers
- Permit Community Choice Aggregation
- Develop a robust Energy Efficiency Certificates program

3- Materials Management

Materials Management – Regional Challenges



	Organic Materials Management (3)	T & D Cost (4)	Flow Control (3)	Regulatory Enforcement (4)	Post - Consumer Product Market (2)	Programmatic Funding (2)	Data Collection and Management
Dutchess		•	•	•			•
Orange				•			•
Putnam	•		•	•			•
Rockland	•	•			•		•
Sullivan				•		•	•
Ulster		•	•			◆	•
Westchester	•	◆					•
<ul style="list-style-type: none"> • Directly Identified as a challenge by County staff ◆ Identified as a challenge by County stakeholders 							

Climate Vulnerabilities

MATERIALS
MANAGEMENT

- Transfer stations, other facilities located on or near floodplains
- Severe weather can generate large volumes of debris, creating management challenges
 - This can be compounded by contamination of debris; also, invasive species like the emerald ash borer

Objectives

MATERIALS
MANAGEMENT



- MM1 - Reduce the volume of solid waste generated
- MM2 - Increase the proportion of materials diverted from landfills via reuse, recycling, composting and other organic recycling methods
- MM3 - Reduce Transportation and Disposal (T&D) Cost

Priority Projects for Implementation

MATERIALS
MANAGEMENT



- Enhance product stewardship
 - Shopping center/retail procurement initiative
- Expand organics recycling
 - Expand ‘Love ‘Em of Leave ‘Em”
 - NYS Corrections compost program
 - Ulster CRRA compost expansion
 - Cornell Cooperative Extension education program
- Encourage material reuse
 - Building Material Reuse Facility
- Increase transportation efficiency and options
 - Intermodal/rail transfer station

Enabling Strategies

MATERIALS
MANAGEMENT



- Inter-County cooperation
 - Integrated Solid Waste System feasibility study
- Policy changes
 - Flow Control legislation - regional, local
 - Demolition debris legislation
 - Universal labeling legislation
 - Transition from NIMBY to YIMBY through online 'opt-in'
- Funding initiatives

4- Agriculture and Open Space

Agriculture and Open Space

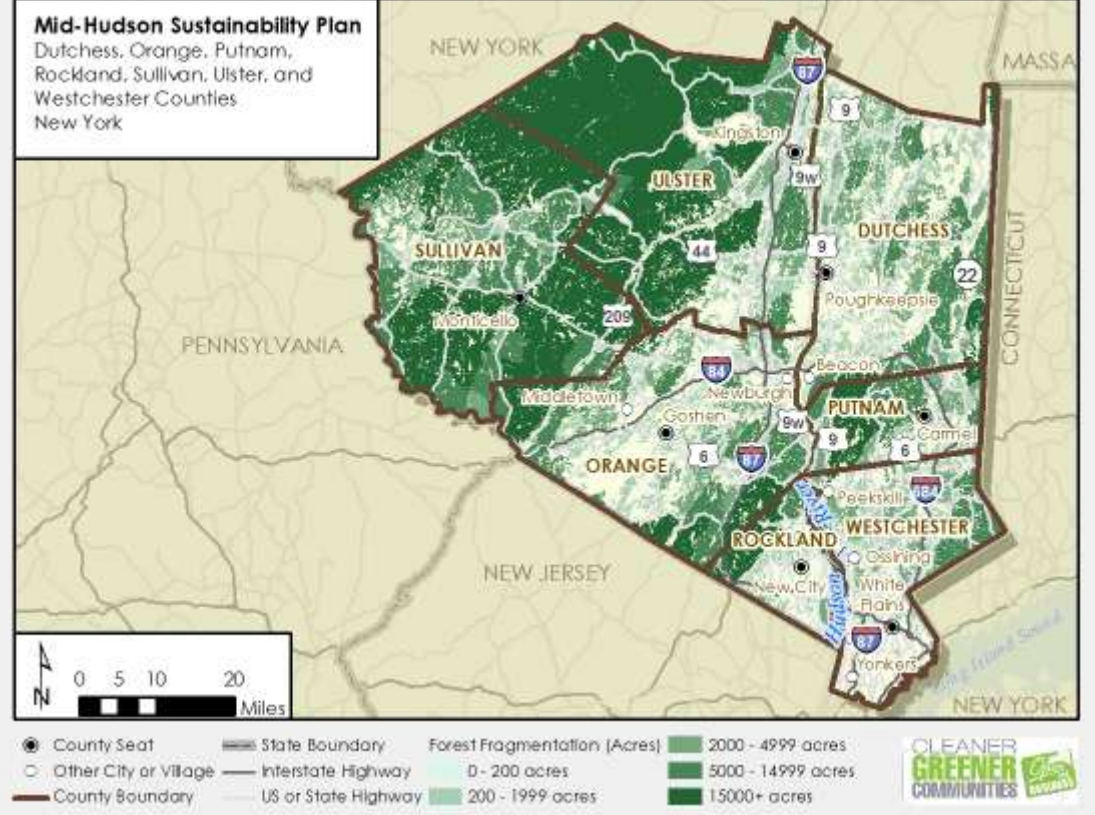
AGRICULTURE AND OPEN SPACE



Path: L:\Buffalo\MidHudson_Sustainability\Maps\MXD\Agriculture_Foodsheds\Agriculture



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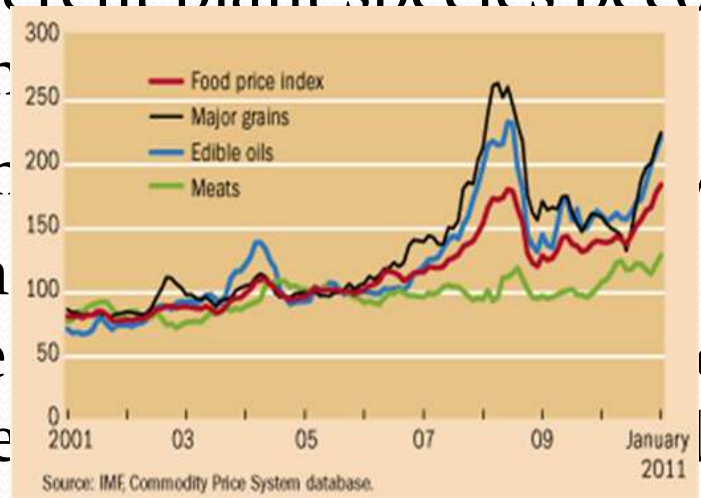
- County Seat
- Other City or Village
- County Boundary
- State Boundary
- Interstate Highway
- US or State Highway
- Pasture/Hay
- Cultivated Crops
- Agricultural District





Climate Change Vulnerabilities

- Food production will likely change as the climate warms and different plant species become viable, livestock are impacted
- Increase in some agricultural products
- Open spaces in agricultural areas are at risk of being converted to residential or commercial use; wetlands and other buffers are at risk of being lost
- Changes in precipitation and temperature will impact forest composition and species habitat



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Objectives

- AO1 - Maintain or increase the magnitude of agriculture/silviculture activities in the Region
- AO2 - Create greater access to agriculture/silviculture sustainability training and technologies
- AO3 - Increase intra-regional consumption of food/fiber
- AO4 - Reduce GHG emissions from farm and farm related activities
- AO5 - Maintain the economic viability of agriculture/silviculture in the Region
- AO6 - Decrease forest fragmentation and increase open space



Priority Projects for Implementation

- Food Infrastructure Networks
 - E.g. Hudson Valley Food Hub Phase 2
- Energy Efficiency and Renewable Energy in Agriculture
 - E.g. Energy Efficiency and Renewables Training Center for Farmers
- Priority Conservation Areas
 - E.g. Black Creek Corridor
 - E.g. Quassaic Creek Multi-Purpose Conservation Corridor



Enabling Strategies

- Sustainable agriculture education & training
 - Rapid Response Training and Tools
- Branding Mid-Hudson agricultural products

5- Water



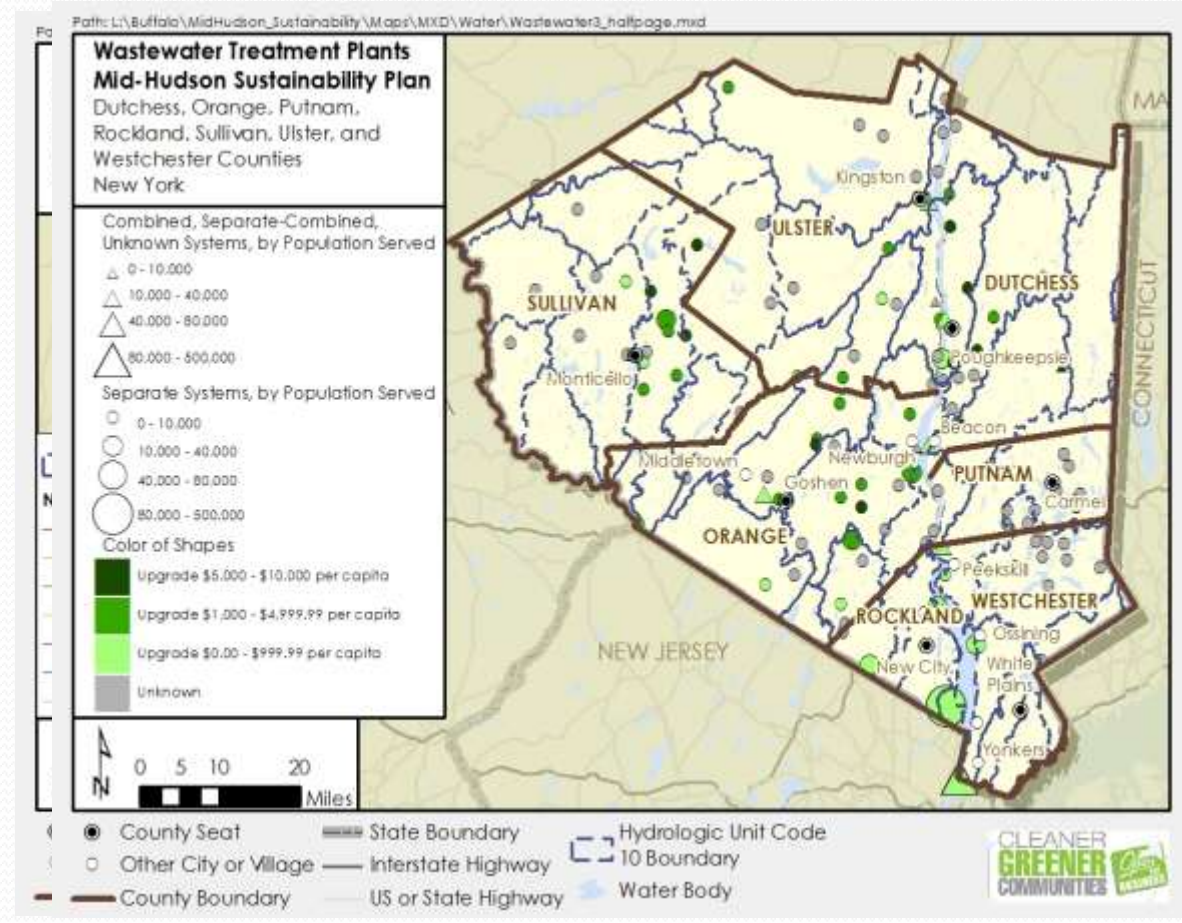
- 83% of withdrawals for thermoelectric power
- 15% for public supply
- 1% for industrial use
- <1% for domestic self-supply
- <1% for aquaculture, mining, irrigation

<ul style="list-style-type: none"> County Boundary State Boundary Water Body Hydrologic Unit Code 4 Boundary Hydrologic Unit Code 8 Boundary 	<ul style="list-style-type: none"> Hydrologic Unit Code 10 Boundary Hydrologic Unit Code 12 Boundary NYCDEP Watersheds Catskill State Park 		<p>NYCDEP and HUC Watershed Boundaries Mid-Hudson Sustainability Plan Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester Counties New York</p>
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Challenges

- Water quality
- Source protection
- Stormwater/CSO
- Aging infrastructure





Climate Change Vulnerabilities

- Changes in water temperatures (which correlate with DO levels)
- More frequent CSOs
- Late summer droughts that cause lower stream flows
- Salt water intrusion
- Sea level rise eroding protective natural buffers such as wetlands
- Numerous water infrastructure facilities such as WWTPs are located in floodplains and other low-lying areas prone to flooding

WATER



Objectives

- WA1 - Increase available water supply by minimizing water consumption
- WA2 - Reduce energy usage and GHG emissions at water and wastewater treatment facilities
- WA3 - Reduce impervious surface area and increase connectivity of permeable surfaces
- WA4 - Improve the reliability of water and wastewater treatment
- WA5 - Protect habitat and water quality
- WA6 - Encourage watershed management planning

Priority Projects for Implementation

WATER



- Implement Low Impact Development (LID) and Green Infrastructure
 - Poughkeepsie Underwear Factory demonstration project
 - SUNY New Paltz green infrastructure program
- Water and Energy Efficiency Upgrades
- Renewable Energy Production
- Climate Hardening
 - Culvert Analysis and Resizing Project



Enabling Strategies



- Watershed Management Planning and Programs
 - Municipal Septic Density Analysis
- Education and Outreach
 - Water Reuse and Rainwater Capture
 - Water Conservation
- Water Infrastructure Benchmarking

Regional Strategies and Plan Implementation

Regional Strategies

- Revise zoning, planning, local ordinances to promote ‘smart growth’
 - Focus development in priority areas
 - Revise codes to remove barriers to density, urban revitalization
- Invest in infrastructure
 - As infrastructure replaced/upgraded/constructed, plan for resiliency, emissions reductions
- Promote tourism
 - Leverage the unique historic, cultural, and natural character of the Region to attract visitors
- ‘MHRP branding’
 - Create a Mid-Hudson brand or label for businesses – eco-pledge and action checklist

Regional Strategies

- Foster innovation in green technologies
 - Use implementation to test new technologies and approaches e.g., community energy districts
 - Partner with industry to create ‘living laboratory’
- Strengthen and support green leadership in government and business
 - Create regional summit and ‘knowledge networks’ around best practices
- Strengthen the workforce through training and ‘green skills’ education
 - Skills gap analysis with business and education institutions
 - Partner with local universities/colleges/high schools



Governance Objectives

- GO1 - Strengthen and promote the view that “Mid-Hudson Region is a national leader in sustainable development”
- GO2 - Track progress against indicators
- GO3 - Enforce/oversee Plan implementation and updates
- GO4 - Facilitate knowledge sharing
- GO5 - Attract funding to the Region

Where to Find the Plan?

www.engagemidhudson.com

More Questions?

David Church dchurch@orangecountygov.com

Thomas Madden tmadden@greenburghny.com

Michael Wironen mwironen@ene.com

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